



This publication contains supplemental installation, operation and maintenance procedures for QMX Mixed-Flow Blowers with the EZ-Out direct drive housing option.

! Carefully read this publication and any supplemental documents prior to any installation or maintenance procedure.

Loren Cook Company's QMX catalog provides additional information describing the equipment, fan performance, available accessories and specification data. For information and instructions on special equipment, contact Loren Cook Company.

For additional safety information, refer to AMCA Publication 410-96, *Safety Practices for Users and Installers of Industrial and Commercial Fans*. This document and all Cook publications may be obtained from Cook by phoning (417) 869-6474, extension 166; by FAX at (417) 832-9431; or by e-mail at info@LorenCook.com. All Cook publications are available on LorenCook.com.

Motor Replacement

On bifurcated fans this process can be accomplished without entering the contaminated airstream, however Loren Cook recommends consulting with your safety advisor prior to proceeding.

1. Bifurcated: Remove the vented motor cover located in the bifurcated housing openings.
Dual Access: Remove the outer and inner access doors.
2. Locate the shaft seal plates (Figure 1). Remove the bolts and remove the seal plate in sections.
3. Once the shaft seal plates are removed the (2) wheel retaining holes will be exposed. Remove the (2) wheel retaining bolts (Figure 1), that are located on top of the motor support. Install them in the wheel retaining holes until they are flush with the housing panel slightly supporting the wheel as shown in (Figure 2). **NOTICE! It is important that you do not over-tighten the retaining bolts as this may bind the motor bearings.**
4. Disconnect all extended lube lines from the motor and move aside as required.
5. Remove wheel lug bolts from wheel back plate, the triangular shaped plate.
6. Remove motor foot bolts from motor. **NOTICE! The motor is now loose.**
7. Remove motor and bushing / shaft locking plate from housing.
8. Record the location to the end of the shaft to the bushing.
9. Remove bushing / shaft locking plate from motor.
10. Slide the new motor shaft through the bushing / shaft locking plate until it protrudes the same amount as the measure recorded in step 8.
11. Place motor back in housing.

12. Tighten motor foot bolts that hold the motor to the housing.
13. Tighten wheel lug bolts on wheel back plate in a circular pattern with the last round applying 65 ft / lbs of torque.
14. Unbolt wheel retaining bolts from wheel and place back in welded nuts on top of motor support.
15. Reinstall shaft seal plates applying caulk and gasket in between seals.
16. Bifurcated: Replace the vented motor cover.
Dual Access: Replace the outer and inner access doors.

Wheel and Inlet Replacement

This process will require entering the contaminated airstream. **NOTICE! Do not proceed without first consulting with your safety advisor.**

1. Remove the inlet cone by removing attachment bolts / nuts around perimeter of the inlet plate.
2. Bifurcated: Remove the vented motor cover.
Dual Access: Remove the outer and inner access doors.
3. Locate the shaft seal plates (Figure 1). Remove the bolts and remove the seal plate in sections.
4. Support the old wheel inside the housing and remove the self-aligning hub hold-down bolts (Figure 2).
5. Remove the wheel hub from the shaft by removing the bushing hold-down bolts and reinstalling them in the bushing push-out holes. This process will pop the bushing off the hub allowing the shaft to be removed.

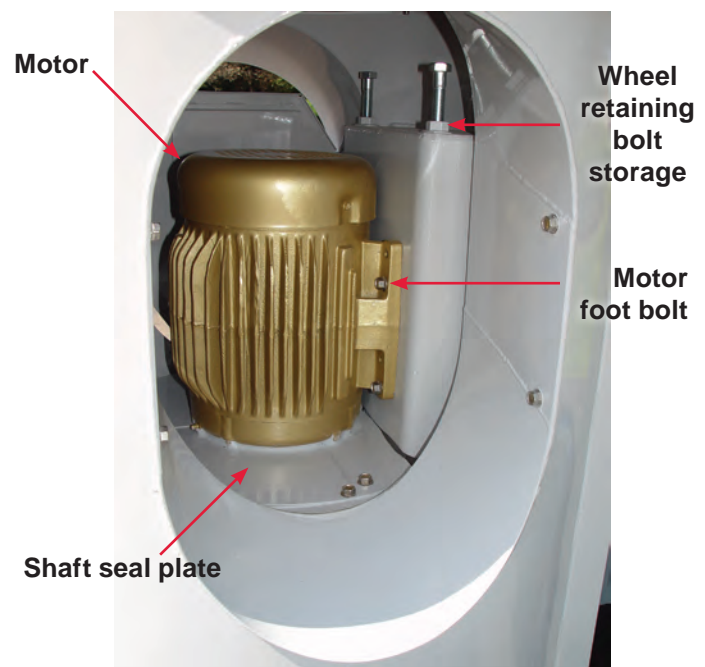


Figure 1: Close-up photo of the bifurcated motor compartment.

6. Install the new wheel with hub attached, less bushing by supporting the new wheel until held in place using the (2) wheel retaining bolts (Figure 1) that are located on top of the bearing support, install them in the wheel retaining holes and align the wheel in the proper location as shown in Figure 2.
7. Install the hub bushing, but do not fully tighten the bushing hold-down bolts.
8. Install the new inlet cone. The wheel may need to be moved to allow proper alignment. Care should be taken to insure that inlet cone is centered inside the wheel before and after tightening attaching bolts/nuts.
9. Adjust the wheel using the (2) wheel retaining bolts (Figure 1) to achieve proper wheel/inlet overlap and tighten the bushing hold-down bolts to the proper torque. Refer to Wheel-to-inlet Clearance on page 3 in the QMX IOM manual and trim balance as necessary (0.785 in/sec max).
10. Reinstall the shaft seal plates (Figure 1) and shaft seal (Figure 1).
11. Reapply caulking around motor face.
12. Bifurcated: Replace the vented motor cover.
Dual Access: Replace the outer and inner access doors.

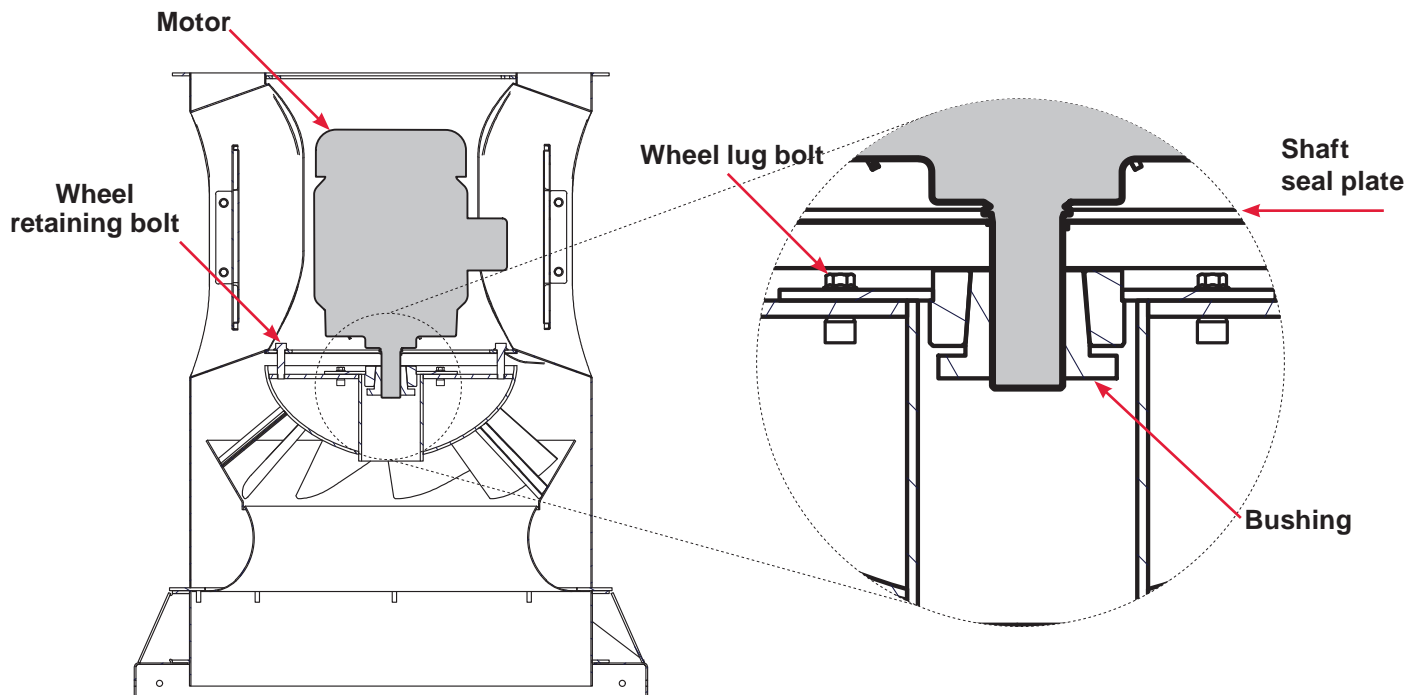


Figure 2: Detailed drawing of motor compartment.



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